WHAT IS CLAIMED IS:

1   1.   A method for authenticating a party to a transaction,

2   for use with a network in which packets entering the

3   network have at least a part of layer 2 information

4   replaced with a unique bit string, the method comprising:

5   a)   examining at least a part of the unique bit

6   string;

7   b)   comparing the at least a part of the unique bit

8   string examined with stored information; and

9   c)   authenticating the party only if the at least a

10   part of the unique bit string examined matches the

11   stored information.

1   2.   The method of claim 1 further comprising:

2   d)   approving a transaction if the party was

3   authenticated.

1   3.   The method of claim 1 wherein the at least a part of

2   the unique bit string examined depends on a type of the

3   transaction.

1   4.   The method of claim 2 wherein the stored information

2   compared with the at least a part of the unique bit string

3   examined depends on the type of the transaction.

1   5.   The method of claim 3 wherein the type of the

2   transaction is selected from a group of transaction types

3   consisting of: (A) transactions greater than a

4   predetermined amount; (B) transactions less than a

5   predetermined amount; (C) purchases delivered to a credit

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6   card billing address; and (D) purchases delivered to an

7   address other than a credit card billing address.

1   6.   The method of claim 1 wherein the stored information

2   compared with the at least a part of the unique bit string

3   examined depends on a type of the transaction.

1   7.   The method of claim 1 wherein the at least a part of

2   the unique bit string examined identifies a location at

3   which packets from the party to the transaction entered the

4   network.

1   8.   The method of claim 1 wherein the at least a part of

2   the unique bit string examined identifies an individual who

3   is a party to the transaction.

1   9.   The method of claim 1 wherein the at least a part of

2   the unique bit string examined identifies a group to which

3   an individual, who is a party to the transaction, belongs.

1   10.   The method of claim 1 wherein the at least a part of

2   the unique bit string examined identifies a customer that

3   is a party to the transaction.

1   11. The method of claim 1 wherein the at least a part of

2   the unique bit string identifies at least one of a customer

3   identification, an individual user identification, a

4   network ingress location, and a user class.

1   12.   The method of claim 1 wherein the at least a part of

2   the unique bit string identifies at least two of a customer

3   identification, an individual user identification, a

4   network ingress location, and a user class.

1   13. The method of claim 1 wherein the at least a part of

2   the unique bit string identifies at least three of a

3   customer identification, an individual user identification,

4   a network ingress location, and a user class.

1   14. The method of claim 1 wherein the unique bit string is

2   provisioned by a network service provider.

1   15. The method of claim 1 wherein the unique bit string is

2   controlled by a network service provider.

1   16. The method of claim 1 wherein the act of

2   authenticating does not require the transmission of any

3   authentication information from the party.

1   17. A method for tracking a network ingress location at

2   which a packet associated with a transaction originated,

3   wherein packets entering the network have at least a part

4   of a layer 2 information replaced with a unique bit string,

5   the method comprising:

6   a)   examining at least a part of the unique bit

7   string; and

8   b)   determining the network ingress location from the

9   at least a part of the unique bit string.

1   18. The method of claim 17 wherein the at least a part of

2   the unique bit string examined identifies an individual who

3   is a party to the transaction.

1   19.   The method of claim 17 wherein the at least a part of
2   the unique bit string examined identifies a group to which
3   an individual, who is a party to the transaction, belongs.

1   20.   The method of claim 17 wherein the at least a part of
2   the unique bit string examined identifies a customer that
3 ‵ is a party to the transaction.

1   21. The method of claim 17 wherein the at least a part of
2   the unique bit string identifies at least one of a customer
3   identification, an individual user identification, a
4   network ingress location, and an individual user class.

1   22.   The method of claim 17 wherein the unique bit string
2   is provisioned by a network service provider.

1   23.   The method of claim 17 wherein the unique bit string
2   is controlled by a network service provider.

1   24.   A method for authenticating a party to a transaction
2   for use with a network in which packets entering the
3   network have a unique bit string applied to them, the
4   method comprising:
5   a)   examining at least a part of the unique bit
6   string;
7   b)   comparing the at least a part of the unique bit
8   string examined with stored information; and
9   c)   approving a transaction only if the at least a
10   part of the unique bit string examined matches the
11   stored information,

12   wherein no information in addition to the unique

13 bit string is needed for authenticating the party to the

14 transaction.

1   25. The method of claim 24 wherein the unique bit string

2   is applied to packets entering the network by replacing at

3   least a part of a layer 2 information with the unique bit

4   string.

1   26. The method of claim 24 wherein the unique bit string

2   is maintained as the packet is communicated within the

3   network.

1   27. The method of claim 25 wherein the unique bit string

2   identifies a logical port at which the packet entered the

3   network.

1   28.   A method for authenticating a party to a transaction,

2   the method comprising:

3   a)   applying a unique bit string to packets entering

4   the network;

5   b)   examining at least a part of the unique bit

6   string;

7   c)   comparing the at least a part of the unique bit

8   string examined with stored information; and

9   d)   approving a transaction only if the at least a

10   part of the unique bit string examined matches the

11   stored information.

1   29. The method of claim 28 wherein the act of applying a

2   unique bit string to packets entering the network includes

3   replacing at least a part of a layer 2 information with the

4   unique bit string.

1   30.   The method of claim 28 wherein the unique bit string

2   is maintained as the packet is communicated within the

3   network.

1   31.   The method of claim 28 wherein the unique bit string

2   identifies a logical port at which the packet entered the

3   network.

1   32.   The method of claim 28 wherein no information in

2   addition to the unique bit string is needed for

3   authenticating the party to the transaction.

1   33.   An apparatus for authenticating a party to a

2   transaction for use with a network in which packets

3   entering the network have at least a part of a layer 2

4   information replaced with a unique bit string, the

5   apparatus comprising:

6   a)   an input for accepting an authentication request;

7   b)   storage means for storing authentication

8   information;

9   c)   means for examining at least a part of the unique

10   bit string;

11   d)   a comparison facility for comparing the at least a

12   part of the unique bit string examined with the stored

13   authentication information; and

14   e)   means for authenticating a party to a transaction

15   only if the at least a part of the unique bit string

16   examined matches the stored authentication

17   information.

1   34. The apparatus of claim 33 further comprising:

2   f)   means for approving the transaction if the party

3   was authenticated.

1   35. The apparatus of claim 33 further comprising:

2   f)   an output for forwarding an authentication

3   response to the transaction facility.

1   36. The apparatus of claim 34 further comprising:

2   g)   an output for forwarding an authorization response

3   to the transaction facility.